

A comparison of multi-component systems approaches to suicide prevention

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Abstract

Objective: To describe the new Australian approach to suicide prevention, LifeSpan, and compare it to other multi-component intervention models.

Method: The components, implementation strategies and effectiveness of three multi-component intervention models are described and compared in a narrative review.

Results: The LifeSpan, European Alliance Against Depression (EAAD), and Zero Suicide models emphasise the provision of evidence-based interventions and continuity of care. Only LifeSpan and EAAD include community-based interventions at the population level, and LifeSpan is the only model to include school-based interventions. Zero Suicide focuses on healthcare settings. Implementation of LifeSpan and EAAD involves the convening of multi-stakeholder teams at the local level. To date, there is some, albeit mixed, evidence in support of EAAD, while LifeSpan and Zero Suicide await further evaluation.

Conclusions: Although multi-component approaches to suicide prevention share similar components, there are some important differences. Multiple interventions implemented at the same time and tailored to the local community context are likely to be the most effective way of reducing the rate of suicide. There is growing evidence for the effectiveness of multi-component systems approaches to suicide prevention; however, further evaluation is required.

Keywords: suicide, prevention, multi-component systems approaches, implementation, evaluation

Now, more than ever, communities and organisations around the world are focused on the prevention of suicide, with a large number of efforts taking place within and between countries.^{1–3} This year, the Australian federal government announced AUD\$47 million to support suicide prevention, including AUD\$3 million for trials in 12 primary health network (PHN) regions.⁴ While this funding is both welcome and needed, the apparent lack of success in reducing the rate of suicide over the last decade highlights the need to seek out and use the best evidence-based suicide prevention approaches and evaluate their effectiveness by systematically monitoring outcomes.⁵

Growing evidence indicates that multi-component systems approaches are likely to be the most effective way of reducing the rate of suicide,^{2,6–8} given the many factors that contribute to suicide. Multi-component approaches combine preventive interventions ranging

from those that target individuals (e.g. people who are at risk of suicide) or personnel (e.g. workers who deal with suicidal crisis) to those that apply to the wider community (e.g. increasing awareness and knowledge of suicide and reducing access to means of suicide). Two well-known multi-component intervention models are the European Alliance Against Depression (EAAD;⁹ formerly the Nuremberg Alliance against Depression, NAD;¹⁰ now Optimising Suicide Prevention Programs and Their Implementation in Europe, OSPI Europe)¹¹ and Zero Suicide.¹² In Australia, the recently developed LifeSpan model is gaining momentum.¹³

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The purpose of this paper is to describe LifeSpan and compare it to other multi-component intervention models, namely EAAD and Zero Suicide. We discuss: (a) the specific components of each approach, (b) the implementation strategy used by each approach, and (c) any evidence of the effectiveness of each approach. To provide a more complete picture of current suicide prevention approaches, we also summarise two multi-component policy frameworks: 'Preventing Suicide: A Global Imperative',¹⁴ developed by the World Health Organization (WHO) in 2014, and 'Living Is For Everyone (LIFE): A Framework for Prevention of Suicide in Australia, 2007',¹⁵ developed by the Australian Government Department of Health and Ageing.

LifeSpan

LifeSpan was developed by the Black Dog Institute and the Australian National Health and Medical Research Council Centre of Research Excellence in Suicide Prevention.¹³ Development involved extensive research to identify and select evidenced-based interventions that have been shown to reduce the rate of suicide. LifeSpan includes nine such interventions (see Table 1).

LifeSpan focuses on simultaneous implementation of all nine evidence-based interventions and governance at a local level to coordinate action.^{13,16} A PHN or local health district leads a locally-based, multi-stakeholder implementation team that includes non-government organisations and education, police, and community groups (e.g. the Illawarra Shoalhaven Suicide Prevention Collaborative).^{16,17} This team is responsible for: engaging people with lived experience of suicide; undertaking a suicide audit of local data and a review of existing services and activities; developing and implementing a comprehensive LifeSpan Suicide Prevention Action Plan; and assisting with systematic monitoring scientific evaluation of outcomes.

LifeSpan is currently being delivered and comprehensively evaluated in four PHN regions of New South Wales, Australia. LifeSpan is also supporting the development of local suicide prevention approaches in a number of health networks/districts across Australia. Estimates of expected reductions in suicide-related behaviour suggest that it may be possible to prevent 21% of suicide deaths and 30% of suicide attempts.⁷

European Alliance Against Depression

Initially trialled as the NAD in 2001,¹⁰ and later rolled out as the EAAD in 2004,⁹ this community-based intervention model has four components (see Table 1). A fifth component, restricting access to lethal means, was added in 2009 as part of the OSPI Europe project.¹¹

The original four-component and current five-component intervention models have been widely implemented across Europe.² Simultaneous implementation of the

components is facilitated by an advisory group comprising various representatives at the local, regional and national level. The diversity of advisory group members and their active engagement have been shown to enhance the implementation process.^{18,19}

Studies have variously shown: a 24% reduction in the number of suicidal acts (suicide attempts and suicide deaths),¹⁰ sustained two years post-intervention;²⁰ a significant reduction in the rate of suicide over a five-year period;²¹ and a significant reduction in the rate of suicide over a two-year period, sustained one year post-intervention but not two and three years post-intervention.²² Preliminary findings from ongoing evaluations of the OSPI Europe project include reductions (Portugal), no changes (Germany and Hungary), and increases (Ireland) in the number of suicidal acts.¹¹ Thus, more research is needed to understand the factors that moderate the effectiveness of this model and its sustainability in terms of reducing suicidal acts over the long term.

Zero Suicide

Zero Suicide was developed in 2011 by the Clinical Care and Intervention Task Force, National Action Alliance for Suicide Prevention, United States of America, as a suicide prevention approach for healthcare and behavioural health organisations.^{12,23} The model includes seven components (see Table 1).

More than 200 organisations are now implementing Zero Suicide.²³ Implementation of the model is described on the Zero Suicide website (<http://zerosuicide.sprc.org/>). Briefly, organisations are invited to join the Zero Suicide Community and offered a ten-step guide to start the implementation process, which includes establishing an implementation team, using the Zero Suicide Toolkit, and formulating an evaluation plan.

Evaluations suggest that an initiative called Perfect Depression Care, which had a formative influence on Zero Suicide, reduced the rate of suicide in the Henry Ford Health System of Michigan by 75% and that this reduction remained for several years.^{24,25} But scepticism exists regarding the extent to which this evidence supports Zero Suicide: Critics say that Zero Suicide deviates from Perfect Depression Care and that the data and outcomes are overstated.²⁶ Preliminary findings following the implementation of Zero Suicide in a community-based behavioural healthcare organisation (Centerstone of Tennessee) point to a 65% reduction in the rate of suicide (cited as a personal communication in Hogan and Grumet).²³ In Australia, Zero Suicide is currently being evaluated in the Gold Coast Mental Health and Specialist Service. More formal studies such as this are required to evaluate the effectiveness of Zero Suicide.

Synthesis and discussion

A comparison of multi-component suicide prevention approaches is shown in Table 1. The three intervention

Table 1. Comparison of suicide prevention approaches

<i>Intervention models</i>		<i>Policy frameworks</i>	
<i>LifeSpan</i>	<i>EAAD</i>	<i>WHO</i>	<i>LIFE</i>
<ul style="list-style-type: none"> • Suicide audit of local data and review of services and existing activity • Improving safety and reducing access to means of suicide • Encouraging safe and purposeful media reporting <ul style="list-style-type: none"> ○ Resources for media regarding safe and responsible reporting • Equipping primary care to identify and support people in distress <ul style="list-style-type: none"> • Gatekeeper and frontline training • Improving the competency and confidence of frontline workers to deal with suicidal crisis • Training the community to recognise and respond to suicidality • Promoting help-seeking, mental health, and resilience in schools 	<ul style="list-style-type: none"> • Enhancing screening and treatment in primary and mental health care <ul style="list-style-type: none"> • Support of high-risk groups and their families • Improving emergency and follow-up care for suicidal crisis • Engaging the community and providing opportunities to be part of the change <ul style="list-style-type: none"> ○ Increasing community awareness and knowledge and about depression • Governance at a local level to coordinate action <ul style="list-style-type: none"> ○ Multi-level governance 	<ul style="list-style-type: none"> • Surveillance • Means restriction • Media <ul style="list-style-type: none"> ○ Media guidelines • Training and education • Access to services • Treatment <ul style="list-style-type: none"> • Building individual resilience and the capacity for self-help • Providing targeted suicide prevention activities • Crisis intervention • Postvention • Awareness <ul style="list-style-type: none"> • Improving community strength, resilience and capacity in suicide prevention • Stigma reduction • Oversight and coordination <ul style="list-style-type: none"> • Taking a coordinated approach to suicide prevention • Implementing standards and quality in suicide prevention 	

Notes: • denotes a stated component; ○ denotes an implied component; EAAD = European Alliance Against Depression; LIFE = Living Is For Everyone; WHO = World Health Organization.

models emphasise training for healthcare professionals and frontline staff, as well as the provision of evidence-based treatment and follow-up care. Whereas Zero Suicide focuses on healthcare settings, LifeSpan and EAAD include community-based interventions at the population level. In LifeSpan, this includes integrating evidence-based interventions into school settings, where interventions can be delivered conveniently and cost-effectively.²⁷ Unlike the WHO and LIFE policy frameworks, postvention is not explicitly included as a component in any of the three intervention models. However, LifeSpan does provide practical guidance for planning an appropriate response to suicide, including care and support for bereaved families and friends and others affected.¹⁶

LifeSpan and EAAD both focus on simultaneous implementation of multiple interventions in recognition of the many factors that contribute to suicide and in anticipation of synergistic benefits.^{7,19} They also both have a multi-stakeholder implementation plan, which can extend the reach of implementation.¹⁸ In contrast, Zero Suicide is a specific set of strategies and tools for healthcare.

To date, there is some, albeit mixed, evidence in support of EAAD (and related models, e.g. OSPI Europe), while LifeSpan and Zero Suicide await comprehensive evaluation. Until then, it may be premature to draw conclusions on the overall effectiveness of multi-component systems approaches to suicide prevention. In particular, important questions remain regarding the feasibility and effectiveness of large-scale implementation. Further work on a larger scale is required to provide more evidence.

With the launch of the Fifth National Mental Health Plan approaching,²⁸ the Australian federal government wants to see effective approaches to suicide prevention in action. Adopting a multi-component approach with a multi-stakeholder implementation plan is an important first step. Making the approach sustainable will require leadership, stakeholder engagement, knowledge exchange, systematic monitoring of outcomes, adaptability and accountability.

Disclosure

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